What is Claimed:

1.   A method for performing a consistency check on a database backup, the method comprising:

generating a list of pages to retrieve from a database backup;

retrieving the pages in the list by reading the database backup;

creating a database view from the database backup; wherein the database view requires less memory space than the database contained in the database backup;

copying a transaction log and the retrieved pages into the database view;

recovering the database view to a transaction consistent state; and

performing a consistency check on the database backup by reading all database pages from one of the database backup and the database view.

2.   The method of claim 1, wherein generating a list of pages to retrieve from a backup of a database comprises generating a page list containing at least one of allocation and metadata pages, pages that were changed in the database while the database backup was being created, pages that contain uncommitted results as of the completion of the database backup and pages necessary to perform logical undo operations.

3.   The method of claim 2 wherein generating a page list containing pages necessary to perform logical undo operations comprises using a key contained in a log record for an update to determine which interior node pages of a B-tree are needed to perform a logical undo operation for a particular log record.

4.   The method of claim 1, wherein generating the list of pages comprises scanning the transaction log in the database backup for pages changed during creation of the database backup.

5.   The method of claim 1, wherein retrieving the pages in the list comprises reading a full database backup once only and copying the pages in the list to the database view.

6.   The method of claim 1, wherein creating a database view from the database backup further comprises creating a database view reflecting the contents of a database backup at a specific point in time.

7.   The method of claim 1, wherein copying a transaction log comprises copying a transaction log containing transactions that occurred while the database was being backed up.

8.   The method of claim 1, wherein recovering the database view to a transaction consistent state further comprises performing redo operations on pages that did not reflect all of the changes that occurred during the database backup operation.

9.   The method of claim 8, wherein the redo operation is based on an associated transaction log whereby all committed transactions are reflected in the database view.

10.   The method of claim 8, further comprising performing undo operations on pages based on the associated transaction log such that the effects of all uncommitted transactions are removed from the database view.

11.   The method of claim 1, further comprising reading the database backup only twice; once for locating the pages in the list and once while performing the consistency check.

12.   The method of claim 1, further comprising delaying the consistency check until the database view has been made transactionally consistent.

13.   The method of claim 1, further comprising performing the consistency check using the database backup and the transactionally consistent database view.

14.   The method of claim 13, wherein performing a consistency check comprises:

reading all pages from the database view once: and

using a page from the database view in the consistency check if a corrected version of the page exists in the database view.

15.   The method of claim 14, further comprising using a page from the database backup in the consistency check if a corrected version of the page does not exist in the database view.

16.   The method of claim 13, further comprising ensuring that all pages not found in the database backup, but instead found only in the view, are included in the consistency check.

17.   A system comprising:

an input device for receiving at least one of database backup information and log transaction data;

a processor having access to memory, the memory having instructions of a software component; and

a software component, which when executed, performs a method comprising:

generating a list of pages to retrieve from a database backup;

retrieving the pages in the list by accessing the database backup;

creating a database view from the database backup; wherein the database view requires less memory space than the database contained in the database backup;

copying a transaction log and the retrieved pages into the database view;

recovering the database view to a transaction consistent state; and

performing a consistency check on the database backup using the database backup and the transaction consistent database view.

18.   The system of claim 17, wherein the software component step of performing a consistency check comprises:

reading all pages from the database view once: and

using a page from the database view in the consistency check if a corrected version of the page exists in the database view.

19.   The system of claim 18, further comprising using a page from the database backup in the consistency check if a corrected version of the page does not exist in the database view.

20.   The system of claim 17, wherein the software component step of performing a consistency check further comprises ensuring that all pages not found in the database backup, but instead found only in the view, are included in the consistency check.

21.   The system of claim 17, further comprising a display device for monitoring the status of the consistency check.

22.   The system of claim 17, wherein the database backup comprises one of sequential storage, disk storage and random access storage.

23.   The system of claim 17, wherein the software component method further comprises reading the database backup only twice; once for locating the list of pages and once while performing the consistency check.

24.   The system of claim 17, wherein the software component step of generating the list of pages comprises scanning the transaction log in the database backup for pages changed during creation of the database backup.

25.   The system of claim 17, wherein the software component step of generating a page list containing pages necessary to perform logical undo logical undo operations comprises using a key contained in a log record for an update to determine which interior node pages of a B-tree are needed to perform a logical undo operation for a particular log record.

26.   The system of claim 17, wherein the software component step of creating a database view from the database backup further comprises creating a database view reflecting the contents of a database backup at a specific point in time.

27.   The system of claim 17, wherein the software component step of recovering the database view to a transaction consistent state further comprises performing undo and redo operations on pages based on an associated transaction log such that all committed operations are reflected in the database view and all uncommitted transactions are removed from the database view.

28.   A computer-readable medium having computer-executable instructions for performing a method of running a consistency check on a database backup, the method comprising:

generating a list of pages to retrieve from a database backup;

retrieving the pages in the list by reading the database backup;

creating a database view from the database backup; wherein the database view requires less memory space than the database contained in the database backup;

copying a transaction log and the retrieved pages into the database view;

recovering the database view to a transaction consistent state; and

performing a consistency check on the database backup by reading all database pages from one of the database backup and the database view.

29.   The computer-readable medium of claim 28, wherein the step of generating a list of pages to retrieve from a database backup further comprises generating a page list containing at least one of allocation and metadata pages, pages that were changed in the database while the database backup was being created, pages that contain uncommitted results as of the completion of the backup and pages necessary to perform logical undo operations.

30.   The computer-readable medium of claim 28, wherein the step of generating the list of pages comprises scanning the transaction log in the database backup for pages changed during creation of the database backup.

31.   The computer-readable medium of claim 28, wherein the step of retrieving the pages in the list comprises reading a full database backup.

32.   The computer-readable medium of claim 28, wherein the step of creating a database view from the database backup further comprises creating a database view reflecting the contents of a database backup at a specific point in time.

33.   The computer-readable medium of claim 28, wherein the step of copying a transaction log comprises copying a transaction log containing transactions at the time the database backup was completed.

34.   The computer-readable medium of claim 28, wherein the step of recovering the database view to a transaction consistent state further comprises performing undo and redo operations on transactions based on an associated transaction log such that uncommitted transactions are removed from the recovered database view.

35.   The computer-readable medium of claim 28, further comprising the step of reading the database backup only twice; once for locating the list of pages and once while performing the consistency check.